

REMARKS/ARGUMENTS

In response to the Office Action mailed December 28, 2005, finally rejecting the claims and the Advisory Action mailed June 6, 2006, Applicants request continuing examination in view of the foregoing Amendment and following remarks. In this Amendment claims 7-10 and 13 are cancelled and new claims 21-23 are added so that claims 6, 11, 12, and 14-23 are now pending.

The Abstract was objected to but it is not apparent what the basis of the objection was. The Abstract did not contain any words such as "means" or "said" and was not unduly lengthy. Nevertheless, to advance the prosecution, a substitute Abstract is supplied.

Claims 8 and 10 were rejected as indefinite as employing a trademark. The cancellation of claims 8-10 and 13 eliminates the basis for the claim rejection.

In preparing the foregoing claim amendment, careful attention has been given not only to the comments of the Office Action mailed December 28, 2005, but also the Advisory Actions mailed June 6, 2006 and June 12, 2006. Essentially, the Examiner asserted that the argument made previously was not commensurate with the language of the independent claim. In the foregoing Amendment, claim 6 is amended to be commensurate with the argument previously presented, an argument that is repeated below. It is on the same basis that new claim 21 has been prepared. Claim 22 responds to the comment that the claims did not describe directly calling the program written in a Native language via the interface processing block, a comment that appeared in the attachment to the Advisory Actions.

Further, in the invention, the optional application processing block and the interface processing block can be executed on a platform different from or independent of the platform of the navigation apparatus by exchanging navigation controlled data and navigation information data using an area for common variables in the interface processing block. This feature permits the optional application processing block to be platform-independent which, in turn, enables development of an optional application on a different platform that includes a virtual platform, such as a personal computer. Moreover, because the optional application developed can be executed on the navigation

apparatus without alteration, software development efficiency is improved. New claim 23, which relates to original claim 10, expresses this feature.

Support for the amendment to claim 6 is found within the patent application in the paragraphs beginning at page 24, lines 14 and 24, page 27 beginning in line 19, page 43 beginning in line 15, and page 47 beginning in line 6. New claim 21 is supported by the description in the patent application with regard to at least the paragraphs beginning at page 43, line 15, and page 47, line 16. New claims 22 and 23 are supported by the two consecutive paragraphs beginning at page 48 in line 30.

All pending claims were rejected as unpatentable over DeLorme et al. (U.S. Patent 6,321,158, hereinafter DeLorme) in view of an excerpt from a book entitled *Inside the Java Virtual Machine* (hereinafter JVM). This rejection is respectfully traversed as to the claims still pending.

Applicants do not fundamentally disagree with the Examiner's description of DeLorme. In addition to a platform block, Applicants agree that DeLorme discloses a navigation apparatus including an optional application processing block, an interface processing block, and a navigation application processing block. All of these three blocks in DeLorme are written using what JVM refers to as a Native language, for example, Windows. Thus, as understood by those of skill in the art, the optional application processing block is dependent upon the platform block.

Figure 9 of the patent application illustrates an embodiment of the invention in a block diagram that is of assistance in understanding, both with respect to claim 6, the sole examined independent claim, and DeLorme, the arrangement of these blocks. As described in the patent application, the platform block comprises, in the embodiment of Figure 9, the navigation operating system, a device driver, and the navigation hardware, elements 42, 43, and 41. The navigation application module 46 encompassing the navigation application processing block of claim 6 is a complicated program providing navigation services. That navigation application processing block can draw upon information from an optional application processing block that adds optional services regarding navigation. In the embodiment of Figure 9, the distribution application module is an example of such an optional application processing block. For the described

embodiment of the patent application, the distribution application module causes the navigation information that is generated to relate to the delivery of goods at various stops made by a vehicle on a particular route.

The optional application processing block and the navigation application processing block communicate with each other through an interface module processing block encompassing the interface module 112 of the embodiment of Figure 9. In the invention, the interface processing block is executed on a virtual platform and is, therefore, independent of the platform block. This description in claim 6 encompasses, for example, the execution of the interface processing block on a Java virtual machine, element 44 in Figure 9, as indicated in that figure and as described in the patent application. In the embodiment of the invention described in the patent application, not only is the interface module 112 executed on a virtual platform, but also the optional application processing block uses the Java language, not a Native language, such as Windows.

As well known to those of skill in the art, navigation application modules have been available in Native languages, such as C or C++, for some time. Because these programs are extraordinarily complicated and include an enormous number of steps, writing such a program in Java is too burdensome to be reasonably undertaken. Thus, as in DeLorme, in the invention, the navigation application processing block represents a block operating in a Native language.

As at least implicitly acknowledged in the rejection, in DeLorme neither the optional application processing block nor the interface module is executed on a virtual platform. Rather, those blocks are executed in a Native language. Therefore, there is no independence of these blocks from the platform block. Thus, the reliance upon JVM is based upon an assertion that it would have been obvious to modify DeLorme in a way that produces the claimed invention by basing at least the interface block on Java. Applicants disagree with the asserted hypothetical modification of DeLorme.

In DeLorme, a function of the interface processing block is called by the optional application processing block in order to use the functions of the navigation application processing block. To achieve that result, based upon the description in JVM, particularly

at pages 32, 33, 126, and 127, one of skill in the art must proceed with care to avoid the difficulties outlined at those two pages of JVM. Because of the limitations set out in JVM, that person of skill in the art would be led to use an interface processing block written in a Native language so that functions of the interface processing block could be directly called from the optional application processing block that is in the Java language. In other words, the structure that would be produced by the hypothesized modification of DeLorme might include an optional processing block in the Java language. However, the interface processing block would remain in a Native language in order to provide direct access to the navigation application processing block. As previously explained, that navigation processing block, most advantageously, is maintained in all systems in a Native language. Thus, platform independence would not be achieved. In other words, it is counterintuitive, and, therefore, not obvious, to provide the interface processing block, as in the invention, to be executed on a virtual platform because of the problems in doing so that JVM warns about. See page 32 of JVM stating that the “most important rule to follow when you are writing a platform-independent Java program is: don’t directly or indirectly invoke any Native methods that aren’t part of the Java API”.

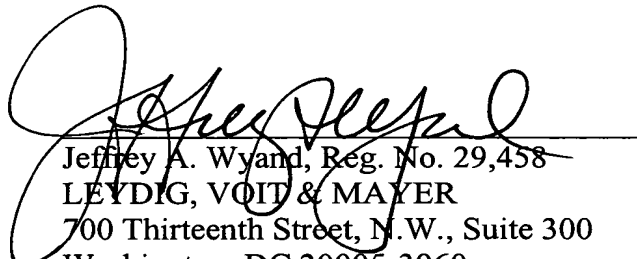
To emphasize the differences between the hypothetically modified DeLorme and the invention, in the modified DeLorme, functions of the interface processing block, which is written in a Native language, are directly called from the optional application processing block, which is written in Java. Therefore, the optional application processing block is dependent upon the platform. By contrast, in the invention, since the optional application processing block, which is written in Java, does not directly call a program written in a Native language, but calls through the interface processing block, which is executed on a virtual platform, there is no dependence on the platform block. On this basis, reconsideration and withdrawal of the rejection as to claim 6, the sole previously examined independent claim, is respectfully requested. Since that claim 6 is, for the reasons supplied, patentable over the asserted combination of prior art publications, so are claims 11, 12, and 14-20, all of which depend directly or indirectly from claim 6.

New claims 21-23 have been previously described, both as to their support in the application as filed and how they further differentiate the invention from the prior art.

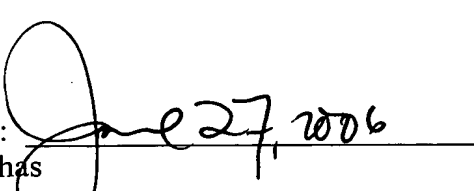
Applicants again emphasize that dependent claim 23 provides an arrangement in which processing can be divided through the use of common, shared variables. Using this arrangement, the optional application processing block and the interface processing block share data in processing. The blocks may be executed independently, on a platform on which a virtual platform is executed. Accordingly, program development and testing on a platform, for example, a personal computer, different from that of the navigation apparatus, can take place. Yet this software can be executed on the virtual platform in the navigation apparatus without modification. Thus, as previously emphasized, software development efficiency is substantially improved by the invention (see the paragraph beginning on page 43, line 15, of the patent application).

Reconsideration and allowance of all claims now pending are earnestly solicited.

Respectfully submitted,



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